APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/652,511	08/31/2000	Kenneth W. Batcher	72255/02659	4471

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EXAMINER
PHILPOTT, JUSTIN M

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	**Applicant(s)**
Office Action Summary	09/652,511	BATCHER, KENNETH W.
	Examiner	**Art Unit**
	Justin M Philpott	2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 August 2000*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.
      4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-26* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *31 August 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
      Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
      Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
      a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).
      * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____ .

DETAILED ACTION

Specification

1.   The disclosure is objected to because of the following informalities: "host processor 10"

(page 7, line 10) should be changed to "host processor 4", and "shared bus 70" (page 8, line 8)

should be changed to "shared bus 60" in order to remain consistent with the figures. Appropriate

correction is required.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
> sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 1-8, 10-17 and 19-25 are rejected under 35 U.S.C. 102(b) as being anticipated by

U.S. Patent No. 5,796,732 to Mazzola et al.

Regarding claims 1, 11 and 20, Mazzola teaches a system for priority-based arbitration to

a shared resource (e.g., bus 110, see FIG. 1), accessible by a plurality of devices (e.g., via ports

102), the system comprising: means for receiving a respective request signal (e.g., "bus (port)

request" or bus request; see col. 2, lines 38-53, col. 4, lines 23-35 and col. 7, lines 35-44) from at

least one of the plurality of devices (e.g., device coupled to the port), the respective request

signal (e.g., bus request) indicating that a respective device desires access to the shared resource

(e.g., bus 110); means for receiving context data (e.g., priority level, see col. 7, lines 43-44 and

col. 8, lines 13-21) indicative of the state of at least one of the plurality of device; means for

generating a respective modified request signal (e.g., see "slot request" in col. 4, lines 23-35; and

"bus (card) requests" in col. 7, lines 43-52) in response to receipt of the respective request signal

(e.g., bus request), the respective modified request signal (e.g., slot request) received by an

arbitration means (e.g., central arbiter 600) for arbitrating access to the shared resource (e.g., bus

110, see col. 7, line 34 – col. 10, line 5); and means for delaying generation of the respective

modified request signal in accordance with the context data (e.g., priority level) (e.g., see col. 2,

lines 42-51 and col. 4, lines 23-29 regarding aggregating similar bus access requests prior to

issuing a single slot request; and more specifically, see col. 7, lines 44-49 wherein the similar bus

access requests are placed in separate queues in accordance with their priority level prior to the

issuance of bus card/slot requests).

Regarding claims 2 and 21 Mazzola teaches the means for delaying includes means for

counting (e.g., see col. 8, lines 28-32 regarding granting/counting a specific number of high

priority requests per each lower priority request).

Regarding claims 3, 12 and 22, Mazzola teaches the means for counting is associated

with a maximum count value corresponding to the context data (e.g., see col. 8, lines 28-32

wherein four high priority requests are granted for each one medium priority request).

Regarding claims 4, 13 and 23, Mazzola teaches generating the modified request signal in

response to rollover of the means for counting (e.g., see col. 7, line 62 – col. 8, line 33 regarding

the means for counting comprises round-robin convention, round-robin inherently comprising

rollover).

Regarding claims 5 and 14, Mazzola teaches at least first and second devices (e.g., coupled to the plurality of ports 102, see FIG. 1) wherein each device generates context data (e.g., priority information of the bus request) that is received by the means for receiving context data (e.g., local arbiter 500) (e.g., see col. 7, line 34 – col. 10, line 5).

Regarding claims 6 and 15, Mazzola teaches the devices may be processors (e.g., see "network entities" in FIG. 1 inherently comprising processors) and the shared resource is a bus (e.g., bus 110).

Regarding claims 7, 8, 16, 17, 24 and 25, further delaying the modified request signal for a particular first and second delay time in accordance with the low and high priority context states is inherent in the system of Mazzola by means of the round-robin priority-based requesting (e.g., see col. 8, lines 22-32).

Regarding claims 10 and 19, Mazzola teaches a predetermined delay may be associated with respective context data (e.g., see col. 4, lines 9-12 regarding providing a specific 40 nsec delay in accordance with the clock cycle timing, and see col. 8, lines 22-32 regarding bus slot allocation according to priority).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 9, 18 and 26 are rejected under 35 U.S.C. 103(a) as obvious over Mazzola in view

of applicant's admitted prior art.

Regarding claims 9, 18 and 26, Mazzola teaches the system discussed above regarding

claims 1, 11 and 20, and further, Mazzola teaches causing no delay in generation of the modified

request signal (e.g., see col. 9, lines 25-27 regarding applying "look-ahead" for next port

requests, implicitly to avoid delay). However, Mazzola may not specifically teach the lack of

delay occurs in an idle state. However, applicant admits that providing an idle state is well

known in the art of priority-based processing (e.g., see specification, page 2, lines 16-18). Thus,

at the time of the invention it would have been obvious to one of ordinary skill in the art to

implement an idle state in the priority-based processing of Mazzola since applicant admits that

providing an idle state is well known in the art of priority-based processing.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to applicant's
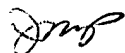
disclosure.

U.S. Patent No. 6,038,234 to LaFollette et al. discloses early arbitration on a full duplex

bus, U.S. Patent No. 6,061,361 to An et al. discloses a time multiplexed scheme for deadblock

resolution in distributed arbitration, and U.S. Patent No. 6,298,067 to Tang discloses a

distributed arbitration scheme for network devices.

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Justin M Philpott whose telephone number is 571.272.3162. The

examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Huy D Vu can be reached on 571.272.3155. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Justin M Philpott

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